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REMARKS/ARGUMENTS

Claims 1-10 are currently pending in this application. By the office action of September 30, 2004, claims 1-10 were rejected on various grounds discussed below. By the present amendment, claims 1 and 8 have been amended. Reconsideration of the claims, as amended, is requested.

Claim Rejections – 35 USC § 103

4. Claims 1-10 were rejected under 35 USC § 103(a) as being unpatentable over the Ulrich U.S. Patent No. 3,492,436 in view of the Hill U.S. Patent 3,978,292.

The Examiner asserts that Ulrich teaches the method and arrangement with variable intervals of ringing cadence. The Examiner notes that Ulrich fails to clearly teach or suggest the method to be used for reducing power in an integrated services hub connected with a plurality of SLICS and fails to teach that the integrated services hub is located on a customer premises.

The Examiner asserts that Hill teaches a line circuit as shown in Fig. 3 operating as an integrated services hub servicing a plurality of subscriber lines. The examiner further asserts that it is known in the art that the line circuit is located on subscriber premises to receive incoming call signals, such as ringing signals sent from a remote central office, CO, for a purpose of eliminating individual ringing control circuits associated with each of the telephone set line circuits.

The Examiner asserts that it would have been obvious to implement the teachings of an arrangement with variable intervals of ringing cadence taught by Ulrich into an integrated services hub, located on the subscriber premises, connected with a plurality of SLICS for

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reducing power in order to reduce ringing power sources and heat or temperature for telecommunications equipment while it has been operating.

The Applicants respectfully traverse these rejections.

As noted in previous responses, there is no teaching in Ulrich concerning reducing power for any purpose. Since the Ulrich system is part of a CO, there are no problems with power consumption, heat dissipation or space requirements. Ulrich provides no teachings or suggestions on these issues, all of which are very important in a customer premises system.

The Examiner has asserted that the Hill lines circuit, LC1, shown in Fig. 3 is located on a customer premises. The Applicants disagree. The line circuit LC1 is one of 128 line circuits forming part of a system which is located at a CO.

There is no statement in the Hill reference that the line circuits, LC1 – LC128, are located on a customer premises. The size, functions and interconnections of the line circuits, LC1 – LC128, make it clear that they are all at the CO. With reference to Fig. 1, at col. 4, line 60 to col. 5, line 4, Hill describes the line circuits and their interconnections. The line circuits are divided into four groups of 32 line circuits. Each line circuit is connected to a time division communication and control bus system and through it to common control circuits CC for controlling telephone call ringing, etc. If any line circuit was located at a customer premises, then the entire bus system providing all the control signals from the common control circuits CC would have to be extended from a CO to each customer premises. This is not possible on the single pair of wires that are used to connect a telephone circuit on a customer premises to a CO.

The main teaching of Hill is the use of shared ringing current loop detectors, used to trip or stop ringing if a telephone is answered during a ringing interval. As described at col. 5, lines 30-63, the Hill system provides four phases of ringing for each of the four line groups. Only four

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lines in each group can be ringing at any time, for a maximum of 16 ringing circuits. Since only four circuits in a group can be ringing at the same time, and each is provided with a different one of the four phasings, the shared ringing current loop detector can continuously monitor all of the four ringing circuits to detect an off hook condition during a ringing period. Thus the purpose of phased ringing taught by Hill is to reduce the number of ringing current loop detectors and not to reduce power in the ringing circuits.

Hill can provide ringing current to only one of each eight of the 128 circuits at the same time. This is further proof that Hill is teaching CO systems, since an on premises integrated services hub has far fewer circuits, typically four to eight, but can ring all the circuits at the same time.

Thus Hill is a system for use in a central office and provides no teaching concerning power reduction.

Since neither Ulrich nor Hill teaches or suggests customer premises equipment, and neither reference teaches anything about power reduction, the Applicants submit that there would be no reason to combine the references and if they are combined, they would not make obvious or anticipate the present invention.

5. Claims 1-10 were rejected under 35 USC § 103(a) as being unpatentable over the Ulrich U.S. Patent No. 3,492,436 in view of the Koda U.S. Patent No. 5,579,386.

The Examiner asserts that Ulrich teaches the method and arrangement with variable intervals of ringing cadence. The Examiner notes that Ulrich fails to clearly teach or suggest the method to be used for reducing power in an integrated services hub connected with a plurality of SLICS and fails to teach that the integrated services hub is located on a customer premises.

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The Examiner asserts that Koda teaches subscriber transmission equipment shown in Figs. 1 and 2 operating as an integrated services hub servicing a plurality of subscriber loops. The examiner further asserts that it is known in the art that the subscriber transmission equipment is located far away from a telephone exchange and located on a customer premises in order to receive incoming call signals, such as ringing signals sent from the remote exchange for a purpose of adding new subscriber service to subscriber loop.

The Examiner asserts that it would have been obvious to implement the teachings of an arrangement with variable intervals of ringing cadence taught by Ulrich into an integrated services hub, located on the subscriber premises, connected with a plurality of SLICS such as line cards for reducing power in order to reduce ringing power sources and heat or temperature for telecommunications equipment while it has been operating.

The Applicants respectfully traverse these rejections.

As noted in previous responses, there is no teaching in Ulrich concerning reducing power for any purpose. Since the Ulrich system is part of a CO, there are no problems with power consumption, heat dissipation or space requirements. Ulrich provides no teachings or suggestions on these issues, all of which are very important in a customer premises equipment.

The Applicants submit that the subscriber transmission equipment of Koda is not an integrated services hub. In addition, while Koda says that the subscriber transmission equipment is not at the CO, it never says it is located on a customer premises. The only disclosed functions for the subscriber transmission equipment of Koda are to provide a ringing signal (alerting cadence) to subscriber telephone sets and to provide a memory for storing the ringing signal, the memory being remotely programmable from the CO. It does not provide any other integrated services hub functions such as conversion of digital network signals to analog telephone signals,

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computer networking, etc. Koda teaches that the switches 25 have one position in which they connect the ring oscillator 24 to a subscriber telephone 21 and another position in which they connect the subscriber telephone 21 to the telephone exchange 20 by lines 22. Thus when the subscriber telephone 21 is connected to the exchange 20, i.e. CO, it is a direct analog connection all the way from the telephone 21 to the CO 20. The subscriber transmission equipment 1 does not process the telephone signals themselves, e.g. does not convert from digital to analog.

Koda does not teach any particular relationship of ringing signals provided to multiple subscriber sets. Koda does not teach or suggest any method of reducing power in the subscriber transmission equipment, much less staggered ringing of telephones to reduce power requirements.

Since neither Ulrich nor Koda teaches customer premises equipment, and neither reference teaches anything about power reduction, the Applicant submits that there would be no reason to combine the references to solve the size and power dissipation problems that are important in customer premises integrated services hubs and if they are combined, they would not make obvious or anticipate the present invention.

Claims 1 and 8 have been amended to further distinguish from the cited art. With these amendments, it is clear that an integrated services hub is a system for converting between digital network signal and conventional analog telephony signals on a customer premises and that the integrated services hub includes a ring voltage power supply and a backup battery. In addition, a whereby clause has been added making it clear that the invention minimizes the size of the ring voltage power supply and extends the backup battery life. With these amendments, the Applicants submit that claims 1 and 8 are clearly patentable over the cited references. Since

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claims 2-7 and 9-10 depend from claims 1 and 8 respectively, the Applicants submit that these dependent claims are also patentable over the cited references.

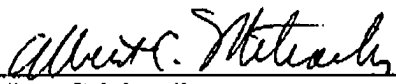
Applicants respectfully submit that the present application as amended is in condition for allowance. If the Examiner has any questions or comments or otherwise feels it would be helpful in expediting the application, he is encouraged to telephone the undersigned at (972) 731-2288.

The Commissioner is hereby authorized to charge payment of any further fees associated with any of the foregoing papers submitted herewith, or to credit any overpayment thereof, to Deposit Account No. 21-0765, Sprint.

Respectfully submitted,
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